DEPARTMENT OF THE NAVY
NAVAL EDUCATION AND TRAINING CENTER
NEWPORT, RHODE ISLAND 02841-5000

IN REPLY REFER TO:

5090
Ser 766 / 424E
22 NOV 1989

State of Rhode Island
Department of Environmental Management
Division of Air and Hazardous Materials
Attn: Ms. Cynthia Gianfrancesco
291 Promenade Street
Providence, RI 02908

Re: Closure of Tanks No. 53 & 56 in Tank Farm 5 at the Naval Education and Training Center, Newport, RI

Dear Ms. Gianfrancesco:

Per your letter of August 29, 1989, we have contacted Mr. Roy Anderson, the Newport City Director of Utilities, requesting permission to discharge the treated water from Tanks No. 53 & 56 at Tank Farm 5 to the Newport Wastewater Treatment Facility. In his 30 October 1989 response, Mr. Anderson declines to accept this discharge. Therefore, we hereby request approval for the discharge of the treated water to Narragansett Bay. The required information concerning the treatment and discharge of the contaminated water is provided in enclosure (1). Further, to enable us to expedite this project, we request your assistance to liaison with RIDEM Division of Water Resources and the RI Coastal Resource Management Council in obtaining approval for this action.

Additionally, our tank closure plan for Tanks No. 53 and 56 at Tank Farm 5 will use a counter-current air stripping process for the treatment of the contaminated water from the tanks prior to discharge. In order to insure that State air quality standards are met, we are forwarding the test results (enclosure 2) of the expected air stripper discharge quantities for your review to determine if an air permit is required. Please note that the data is based on an actual pilot plant study, which was performed on the water in Tank No. 53. This tank was used since prior testing indicated that the aqueous portion of this tank contained greater concentrations of volatile organics than Tank No. 56.

Your timely response concerning these permitting actions is necessary in order for us to adhere to the schedule proposed in our letter dated 3 October 1989.

If you have any questions, our point of contact is Rachel Marino at 841-3735.

Sincerely,

W. F. BURKE
Captain, CEC, USN
Director for Public Works
By direction of the Commander

Enclosures:
(1) Tanks No. 53 & 56, Water Discharge Quantities
(2) Tanks No. 53 & 56, Air Stripping Discharge Quantities
(3) Location Maps

Copy to:
RI Coastal Resource Management Council
RIDEM Division of Water Resources (Mr. Angelo Liberti)

WATER TREATMENT DISCHARGE QUANTITIES FOR TANKS NO. 53 AND 56 IN TANK FARM 5

BACKGROUND. The Naval Education and Training Center (NETC) is under a compliance order by the Rhode Island Department of Environmental Management to initiate closure of two 60,000 barrel concrete underground storage tanks, Tanks No. 53 and 56, in Tank Farm 5.

These tanks contain oily contaminated waters which originated from previous NETC operations for the storage of waste oils. Presently, the tanks contain liquid in three phases. A floating oil layer, a bottom sludge layer, and a contaminated water phase. The closure requires removal of the contents. The floating oils will be scavenged and the sludge collected; these components will be disposed off-site. Our proposed method to dispose of the water phase is treatment and discharge.

WATER DISCHARGE QUANTITIES. The treatment system will consists of an oil-water separator followed by a two-stage countercurrent air stripper. The treated effluent will include the following components. (Effluent concentration of contaminants are maximums expressed as micrograms per liter (parts per billion)).

Benzene	75
1,1 Dichloroethane	30
1,2 Dichloroethane	<10
Ethylbenzene	40
Toluene	800
1,1,1 Trichloroethane	30
Trichloroethylene	<10
Xylene	140
Vinyl Chloride	60

There are approximately 3.8 million gallons of water which must be disposed. We propose to operate our system at a rate of 100 gallons per minute. At these rates, the disposal operation will take approximately 3 months operating 8 hours daily.

DISCHARGE POINT. A temporary pipeline will be constructed to the discharge point. It is expected that the water can be discharged into Narragansett Bay at Stillwater Basin as noted on the enclosed maps.

ENCLOSURE (1)

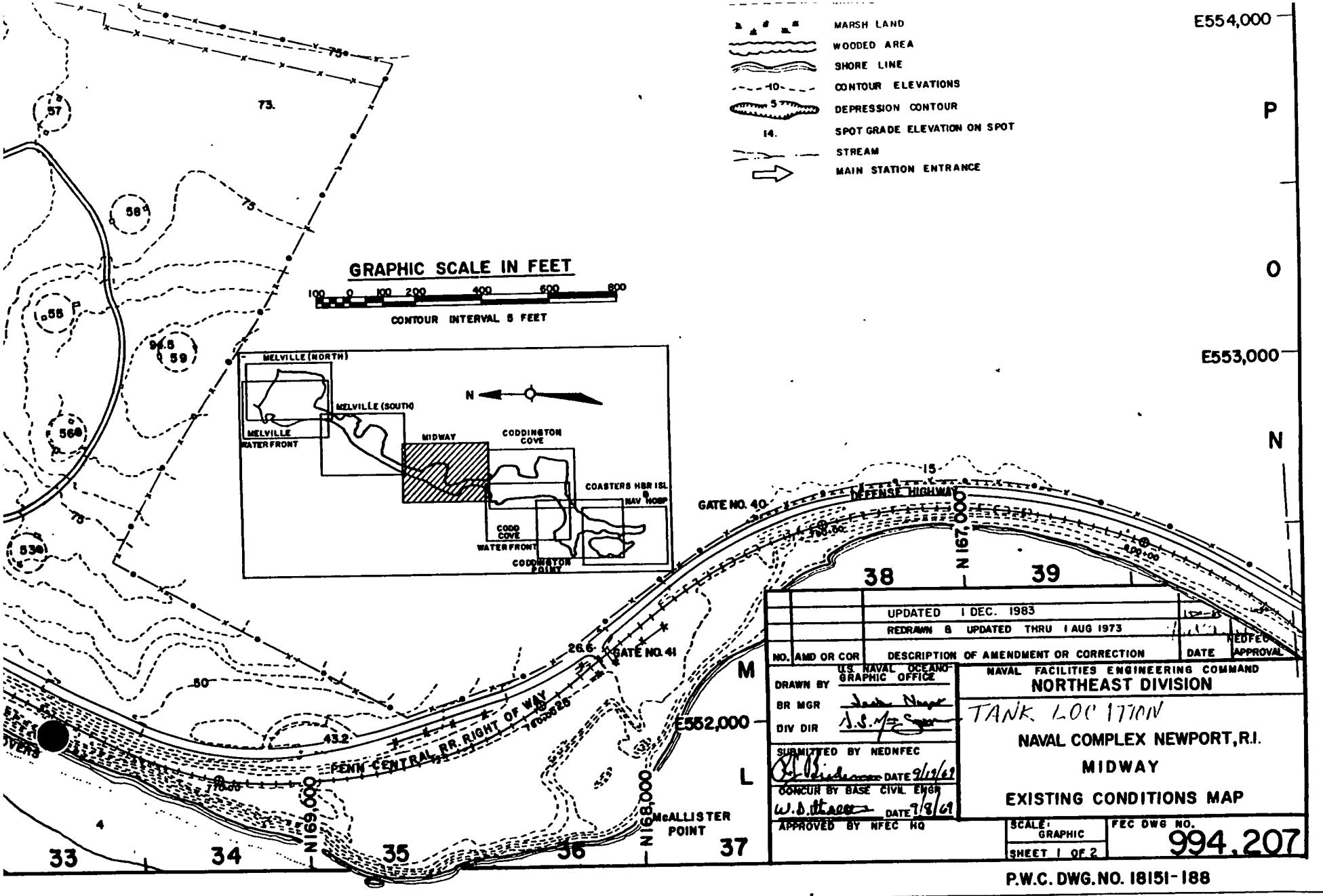
NETC-D Air Stripper Discharge Quantities
Date: 11/07/89

Maximum water flowrate (gpm):	100
Hours operation per day:	8
Total volume air/water (2 columns):	160
Maximum water volume treated (gal):	3800000
Days needed for treatment:	79.2

Compound	Molecular Weight	Air Concentration (ppm)	Amount Vented (lbs/day)	Total Amount Vented (lbs)
Benzene	78	1.35	0.302	23.90
11 Dichloroethane	98.8	1.80	0.508	40.20
12 Dichloroethane	98.8	0.08	0.024	1.90
Ethylbenzene	108.2	0.31	0.096	7.60
Toluene	92.1	1.62	0.428	33.87
111 Trichloroethane	133.2	1.34	0.512	40.52
Trichloroethylene	131.2	0.00	0.002	0.13
Xylene	106.2	1.30	0.396	31.34
Vinyl chloride	62.6	5.20	0.932	73.75

	Water Concentration (ug/l)	
Compound	Inlet	outlet
Benzene	830	75
11 Dichloroethane	1300	30
12 Dichloroethane	70	10
Ethylbenzene	280	40
Toluene	1870	800
111 Trichloroethane	1310	30
Trichloroethylene	14	10
Xylene	1130	140
Vinyl chloride	2390	60

ENCLOSURE (2)



NO.	AMD OR COR	DESCRIPTION OF AMENDMENT OR CORRECTION	DATE	NEDFEC APPROVAL
		UPDATED 1 DEC. 1983		
		REDRAWN & UPDATED THRU 1 AUG 1973		

DRAWN BY U.S. NAVAL OCEANOGRAPHIC OFFICE
BR MGR
DIV DIR
SUBMITTED BY NEDNFEC DATE 9/19/69
CONCUR BY BASE CIVIL ENGR DATE 9/8/69
APPROVED BY NFEC HQ

NAVAL FACILITIES ENGINEERING COMMAND
NORTHEAST DIVISION

TANK LOCATION

NAVAL COMPLEX NEWPORT, R.I.

MIDWAY

EXISTING CONDITIONS MAP

SCALE: GRAPHIC
SHEET 1 OF 2
FEC DWG NO. 994,207

P.W.C. DWG. NO. 18151-188

ENCLOSURE (3)